920476-904914

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of	:	Christopher Tate
Serial No.	:	09/737,050
Filed	:	December 14, 2000
For	:	Communications System and Method Therefor
Examiner	:	James R Sheteheda
Art Unit	:	2623
Customer number	:	23644
Confirmation number	:	7139

APPEAL BRIEF

Honorable Director of Patents and Trademarks
PO Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This appeal is from the Examiner's final Office Action mailed September 10, 2007 in which all pending claims (namely Claims 1 to 7, 9 to 11, 13 to 15, 17 to 19, 21 to 23 & 25) were rejected. A timely Notice of Appeal was filed with the required fee.

The required $510 fee pursuant to 37 C. F. R. § 41.20(b)(2) should be deducted from deposit account no. 12-0913.

(i) Real Party in Interest

This application is assigned to Nortel Networks Limited who is the real party in interest.

(ii) Related Appeals and Interferences

There are no related appeals or interferences.

(iii) Status of Claims

This application was filed with claims 1 to 25. In the responses during prosecution before the Examiner, claims 1, 5, 6, 10, 11, 13 to 15, 18, 19, 22 and 23 were amended and claims 8, 12, 16, 20 and 24 cancelled. During amendment, the independent claims have each been amended to recite features patentably distinguishing the invention over the prior art of record. Claims 1 to 7, 9 to 11, 13 to 15, 17 to 19, 21 to 23 & 25 are those claims being appealed, and are set forth in the Claims Appendix.

(iv) Status of Amendments

No claims amendments have been made following the final Office Action of September 10, 2007. The claims now pending have all been considered by the Examiner and finally rejected. It is the rejection of these claims as set forth in the final Office Action mailed September 10, 2007 that is appealed.

(v) Summary of Claimed Subject Matter

Claim 1

In a first main aspect according to claim 1, the invention as presently claimed is concerned with a system for streaming data comprising a content providing server (page 7, line 32, figure 2) capable of storing content (page 8, lines 29 to 34) and communicating the content to a plurality of client terminator units (page 8, lines 9 to 18) via a communications network (page 7, line 33) in response to requests for the content (page 11, lines 30 to 34. The system further comprises a distribution server (page 8, lines 5 to 7, figure 3) coupled in-line between the content providing server and the plurality of client terminator units (figure 1). The distribution server is arranged to generate a plurality of onward data streams and transmit the plurality of onward data streams to the plurality of second client terminator units, respectively, (page 8, lines 9 to 18) in response to control data received from the content providing server and in response to an incoming data stream received or being received from the content providing server (page 10, line 2), the incoming data stream corresponding to the content, wherein the plurality of onward data streams correspond substantially to the content and are offset in time with respect to each other by a single offset value indicated in the control data (page 10, line 12 to page 11, line 2).

Claim 5.

In another main aspect according to claim 5, the invention as claimed concerns a multicast server (figure 3) for streaming data. The multicast server comprises a processor unit coupled to a storage device and a router, the processor unit being arranged to receive control data from a content providing server (figure 2) and to receive an incoming data stream corresponding to content from the content providing server in response to requests for the content. The processor unit is arranged to

store at least part of the incoming data stream in the storage device and is further arranged to generate a plurality of onward data streams for transmission to a plurality of client terminator units, respectively, in response to the control data received from the content providing server and in response to the incoming data stream received or being received from the content providing server. The plurality of onward data streams correspond substantially to the content and are offset in time with respect to each other by a single offset value indicated in the control data (page 9, lines 5 to 30).

Claim 10.

According to claim 10, the invention also concerns a method of streaming data between a content providing server and a plurality of client terminator units (page 7, lines 18 to 24). The method comprises receiving at a distribution server control data sent from the content providing server (page 10, lines 1 to 4); receiving at the distribution server at least part of an incoming data stream corresponding to content from the content providing server in response to requests for the content (page 9, lines 33 to 35); and in response to receiving the control data and the at least part of an incoming data stream, generating a plurality of onward data streams (page 10, lines 24 to 29). The method further comprises transmitting the plurality of onward data streams to the plurality of client terminator units, respectively; wh erein the plurality of onward data streams correspond substantially to the content and are offset in time with respect to each other by a single offset value indicated in the control data (page 10, line 29 to page 11, line 2).

Claim 14.

According to claim 14, the invention also concerns computer executable software code (page 13, lines 1 to 9) for implementing the steps of the method of claim 10, the references to parts of the specification identified for claim 10 being applicable here.

Claim 18.

According to claim 18, the invention also concerns a programmed computer (page 13, lines 1 to 9) for implementing the steps of the method of claim 10, the references to parts of the specification identified for claim 10 being applicable here.

Claim 22.

According to claim 22, the invention also concerns a computer readable medium storing executable software code (page 13, lines 1 to 9) for implementing the steps of the method of claim 10, the references to parts of the specification identified for claim 10 being applicable here.

In the present invention it is only necessary to transmit one data stream comprising "original" content from a content service provider to a distribution server in a system where a client termination unit (subscriber unit) can be controlled by its respective subscriber to receive/display a conveniently timed staggered one of a plurality (at least first and second) of onward data streams from the distribution server, said onward data streams corresponding substantially to the original content from the content service provider and being transmitted from the distribution server offset in time. This is achieved by sending control data from the content service provider to the distribution server containing an offset value that enables the distribution server to stagger in time the transmissions of the plurality of onward data streams generated in said server from the (single) original content received from the content service provider. Thus, it is an essential feature of the present invention that the offset value utilized by the distribution server to control the time stagger of the plurality of onward data streams is provided by the content service provider. In contrast to known systems where the plurality of time staggered onward data streams are transmitted from the content service provider to the distribution or multi-

cast server, the present invention greatly reduces the bandwidth required on the communications link between the content server provider to the distribution server which is highly desirable. The system of the present invention is also more versatile than existing systems in that the timing offset can be quickly modified by sending from the content serving provider to the distribution server a single new value for the timing offset.

(vi) Grounds of Rejection To Be Reviewed on Appeal

There are four rejections at issue:

1. the rejection of claims 1, 3, 4, 7, 10, 13, 14, 18, 21, 22 & 25 under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6201536 to Hendricks et al in view of US Patent No. 6464381 to Hodge et al and further in view of US Patent No. 6564381 to Banker et al;

2. the rejection of claims 2, 11, 15, 19 & 23 under 35 U.S. C. 103(a) as being unpatentable over US Patent Number 6201536 to Hendricks et al in view of US Patent No. 6464381 to Hodge et al and in view of US Patent No. 6564381 to Banker et al and further in view of US Patent No. 5701582 to Debey;

3. the rejection of claims 5, 6 and 9 under 35 U.S. C. 103(a) as being unpatentable over US Patent No. 6201536 to Hendricks et al in view of US Patent No. 6464381 to Hodge et al and in view of US Patent No. 6564381 to Banker et al and further in view of US Patent No. 6304578 to Fluss;

4. the rejection of claim 7 under 35 U.S. C. 103(a) as being unpatentable over US Patent No. 6201536 to Hendricks et al in view of US Patent No. 6304578 to Fluss and in view of US Patent No. 6564381 to Banker et al and further in view of US Patent No. 5701582 to Debey.

(vii) Argument

Ground 1:

Claim 1.

In the Examiner's view, Hendricks teaches all of the limitations of, for example, claim 1, save that it fails to specifically disclose communicating content in response to requests for the content and wherein the data streams are offset by a *single* value. However, the Examiner contends that Hodge discloses a video distribution system wherein a super hub controller will determine when content is to be distributed in response to requests by motion picture studios as to how and when the content is to be distributed for ensuring maximum revenue distribution from broadcast video programs. Thus, it is the Examiner's view that it would have been obvious to one skilled in the art to modify Hendricks' system to include communicating content in response to requests for the content, as taught by Hodge, for ensuring maximum revenue distribution from broadcast video programs.

The Examiner then proceeds to indicate that Banker discloses a broadcast television system for providing NVOD services wherein a plurality of data streams consisting of the same program are transmitted continuously and sequentially with each data stream offset with respect to a preceding one by a single offset value. Thus, it is the Examiner's view that it would have been obvious to one skilled in the art to modify the combined system of Hendricks and Hodge to include a single offset value for the typical benefit of providing a clear and consistent indication of the wait required for a user to start viewing the movie.

Applicant respectfully disagrees for the following reasons.

Banker is representative of prior art systems acknowledged at page 1, lines 12 to 21 of the specification, as filed, in which a movie is repeatedly transmitted at a repeat interval of, for example, 10 to 15 minutes. Each transmission of the movie takes place over a separate channel. Consequently, a number of channels are required to respectively show multiple versions of the movie, each version of the movie corresponding to a respective start time. A subscriber to the NVOD service wishing to view the movie simply needs to determine a next start time convenient to the subscriber and request to view the movie shortly before the next start time. The communications system then permits the subscriber to view the movie on an appropriate channel corresponding to the next start time (see figure 9 of Banker).

Column 8, lines 8 to 19 of Hendricks, discloses that the Operations Center of Hendricks performs two primary services: (i) packaging television programs for transmission, and (ii) *generating the program control information signal.* At column 8, lines 31 to 43 it is disclosed that:

> "*Once the program packages have been created, the operations center 202 generates a program control information signal that is delivered with the program packages to the cable headend 208 and/or set top terminals 220. The program control information signal contains a description of the contents of the program package, commands to be sent to the cable headend 208 and/or set top terminals 220, and other information relevant to the signal transmission. This signal may include information on program packages (e.g., channel number, program title, program length, program category,* ***start times****, etc.) and menu content*" (emphasis added).

The Examiner has stated in the Office Action that Hendricks teaches that the plurality of onward data streams are offset with respect to each other by an offset value, i.e. *wherein the start time of each channel is staggered so as to be offset from the preceding one.* The start times as acknowledged by the Examiner during the

examination procedure in the Advisory Action mailed June 5, 2006 are obtained from "*the program control information signal transmitted from the operations center*" and that "Hendricks specifically discloses "*wherein the programming schedule, including start times, is created by the operations center 202*" and further states that "*program start times are decided by the operations center*". By means of the foregoing, the Examiner acknowledges that Hendricks does not disclose a single offset value. In Hendricks, each program will have its own start time determined by the operations center which is unaffected by any process performed by the distribution server, but there is no mechanism for the distribution server *as required by the claimed invention* to effect any timing offsets. Hendricks does not disclose sending a single offset value from the operations center to the headend (distribution server) in the manner claimed in the present invention. In Hendricks, there is no need to send an offset value since all programming scheduling for scheduled programs are controlled and assigned by the operations center. Given that all programming scheduling for scheduled programs are controlled and assigned by the operations center, Hendricks provides no motivation to modify the system taught therein by applying a single offset time as taught by Banker. In fact, to do so goes directly against the teaching of Hendricks because it may corrupt the programming scheduling for scheduled programs assigned by the operations center.

Beyond asserting that it would be obvious to apply the single timing offset value taught by Banker to the system of Hendricks modified by Hodge, the Examiner provides no indication of how this would be done and why it would inevitably arrive at the claimed arrangement.

Remember, in the present invention it is only necessary to transmit one data stream comprising "original" content from a content service provider to a distribution server in a system where a client termination unit (subscriber unit) can be controlled by its respective subscriber to receive/display a conveniently timed staggered one of a plurality (at least first and second) of onward data streams from the distribution

server, said onward data streams corresponding substantially to the original content from the content service provider and being transmitted from the distribution server offset in time. This is achieved by sending control data from the content service provider to the distribution server containing an offset value that enables the distribution server to stagger in time the transmissions of the plurality of onward data streams generated in said server from the (single) original content received from the content service provider.

Considering the system of Hendricks modified by Hodge to include communicating content in response to requests for the content for ensuring maximum revenue distribution from broadcast video programs, how should the single timing offset value of Banker be applied to this modified system? There appear to be two possibilities, namely (i) applying the single timing offset value to programs within a program package or (ii) applying the timing offset to the program packages (comprising channel number, program title, program length, program category, start times, etc). to thereby offset said program packages with respect to each other by said single value. Neither possibility is viable.

In the case of (i), application of the single timing offset value to programs within a program package would clearly corrupt the start times for such programs provided by the program control information signal for that program package and clearly would not be seriously contemplated as an option by one of ordinary skill in the art.

In the case of (ii), application of the single timing offset value to the program packages would not result in the claimed invention because Banker does not teach applying a single offset value to program packages but to a plurality of data streams comprising the same program as acknowledged by the Examiner in the last paragraph of page 5 of the final Office Action dated September 10, 2007 and as disclosed at column 11, lines 23 to 42 of Banker where reference is made to a program event such as a movie of one hour duration. A program event is not the

same thing at all as a program package. One of ordinary skill in the art would not seriously contemplate applying a single offset value as taught by Banker to the program packages taught by Hendricks given that said program packages have program control signals comprising channel number, program title, program length, program category, start times, etc.

In the "Response to Arguments" section of the final Office Action mailed September 10, 2007, the Examiner makes references to the staggered NVOD programs described at column 34, lines 32 to 46 of Hendricks. The Examiner makes a number of assertions in the "Response to Arguments" such as, for example, that the "Operations Center will determine the start times for NVOD programs which are offset in time from one another". Where in Hendricks is this feature disclosed? If, in answering this query, the Examiner's contends that said feature is provided as part of process described at column 8, lines 31 to 43 by which the Operations Center creates program packages and program control information signals, then this brings us straight back to the above question of how is the single offset value taught by Banker applied to the program packages taught by Hendricks?

Furthermore, the Examiner's assertion in the "Response to Arguments" section to the effect that the use of a single value to offset the programming would not interfere with the workings of the Hendricks Operation Center as it would continue to create and transmit the program control information signal describing the program start times is demonstrably false for reasons explained above. Either the single timing offset value taught by Banker is applied to programs within a program package taught by Hendricks by which it must result in corruption of the start times of programs within the package or it is applied to the program packages themselves which, of course, are not 'programs' in the manner taught by Banker and to which the single timing offset value taught by Banker is to be applied.

If the Examiner is to maintain his obviousness rejection to claim 1 etc. based on the mosaic of references comprising Hendricks, Hodge and Banker, he must provide an answer to this apparent conundrum.

In Banker, the single offset value of 15 minutes is the time gap between transmission of one of a plurality of data streams comprising program events (movies, for example) and a preceding one of said plurality of data streams.

The Examiner is of the view that it would have been obvious for one skilled in the art to apply the single offset value taught by Banker to the combined system of Hendricks and Hodge such that in the combined system each of a plurality of data streams is transmitted with respect to a preceding one by a time gap equal to the single offset value (15 minutes in Banker).

However, one skilled in the art would immediately recognize that to apply the single offset value taught by Banker to the combined system of Hendricks and Hodge such that in the combined system each of a plurality of data streams is transmitted with respect to a preceding one by a time gap equal to the single offset value would entirely compromise the function of Operations Center in generating the program control information signal in respect of program transmission start times and thus compromise one of the primary functions of the Operations Center. If a single offset value as taught by Banker were employed in the combined system of Hendricks and Hodge, then there would be no purpose in the Operations Center performing one of its primary functions of preparing a program control information signal including program start times.

For this reason alone, one skilled in the art would not seriously contemplate applying the teaching of Banker to the combined system of Hendricks and Hodge.

Furthermore, even if one skilled in the art did attempt to modify the combined system of Hendricks and Hodge using the teaching of Banker, it would not result in the system as claimed. A person of ordinary skill in the art would recognize that applying the single time offset value taught by Banker would compromise one of the primary functions of the Operations Center in producing program information including program start times. Therefore, the person skilled in the art would not seriously contemplate applying the 15 minute single offset value taught by Banker in replacement of movie start times for the aforementioned reason that this would compromise or indeed negate a primary function of the Operations Center.

Consequently, as demonstrated above with respect to at least independent claim 1 as presently pending, one skilled in the art would not be motivated to apply the teaching of Banker to the combined system of Hendricks and Hodge and, even if he/she did, it would not result in the claimed invention. The Examiner is clearly in error and should be reversed.

Claims 5, 10, 14, 18 and 22.

The same reasoning is applicable to independent claims 5, 10, 14, 18 and 22.

Claim 3.

Hendricks does not disclose a single offset value. The offset value of claim 3 is the single offset value of claim 1. Consequently, none of Hendricks, Hodge or Banker discloses the content providing server providing a single offset value. Furthermore, any implicit timing offsets between programs of the program packages created by the Operations Center of Hendricks do not comprise a single offset value and thus the feature of claim 3 is not disclosed or suggested by Hendricks.

Ground 2:

This ground is moot in view of the foregoing submission in respect of ground 1. Furthermore, the Examiner is relying on a mosaic of references that extends beyond the bounds of reason.

Ground 3:

This ground is moot in view of the foregoing submission in respect of ground 1. Furthermore, the Examiner is relying on a mosaic of references that extends beyond the bounds of reason.

Ground 4:

This ground is moot in view of the foregoing submission in respect of ground 1. Furthermore, the Examiner is relying on a mosaic of references that extends beyond the bounds of reason.

Reversal of the Examiner is therefore clearly in order and is solicited.

January 10, 2008

Respectfully submitted,

William M. Lee, Jr.
Registration No. 26,935
Barnes & Thornburg LLP
P.O. Box 2786
Chicago, Illinois 60690-2786
(312) 214-4800
(312) 759-5646 (fax)

Claims Appendix

1. A system for streaming data comprising a content providing server capable of storing content and communicating the content to a plurality of client terminator units via a communications network in response to requests for the content, and a distribution server coupled in-line between the content providing server and the plurality of client terminator units, wherein the distribution server is arranged to generate a plurality of onward data streams and transmit the plurality of onward data streams to the plurality of client terminator units, respectively, in response to control data received from the content providing server and in response to an incoming data stream received or being received from the content providing server, the incoming data stream corresponding to the content, wherein the plurality of onward data streams correspond substantially to the content and the distribution server offsets in time each of the plurality of onward data streams with respect to a preceding one of said plurality of onward data streams by a single offset value indicated in the control data.

2. A system as claimed in Claim 1, wherein the plurality of onward data streams is generated prior to receipt of all of the incoming data stream.

3. A system as claimed in Claim 1, wherein the offset value is provided by the content providing server.

4. A system as claimed in Claim 1, wherein the distribution server is arranged to loop a first one of the plurality of onward data stream at least once.

5. A multicast server for streaming data, comprising a processor unit coupled to a storage device and a router, the processor unit being arranged to receive control data from a content providing server and to receive an incoming data stream corresponding to content from the content providing server in response to requests

for the content, and being arranged to store at least part of the incoming data stream in the storage device, wherein the processor unit is further arranged to generate a plurality of onward data streams for transmission to a plurality of client terminator units, respectively, in response to the control data received from the content providing server and in response to the incoming data stream received or being received from the content providing server, wherein the plurality of onward data streams correspond substantially to the content and wherein each of the plurality of onward data streams is offset in time by the multicast server with respect to a preceding one of said plurality of onward data streams by a single offset value indicated in the control data.

6. A multicast server as claimed in Claim 5, wherein the router is arranged to transmit the plurality of onward data streams to the plurality of client terminator units, respectively.

7. A multicast server as claimed in Claim 5, wherein the plurality of onward data streams are generated prior to receipt of all of the incoming data stream.

9. A multicast server as claimed in Claim 5, wherein the processor unit is arranged to loop a first one of the plurality of onward data stream at least once.

10. A method of streaming data between a content providing server and a plurality of client terminator units, the method comprising the steps of:

receiving at a distribution server control data sent from the content providing server;

receiving at the distribution server at least part of an incoming data stream corresponding to content from the content providing server in response to requests for the content;

in response to receiving the control data and the at least part of an incoming data stream, generating a plurality of onward data streams, and

transmitting the plurality of onward data streams to the plurality of client terminator units, respectively;

wherein the plurality of onward data streams correspond substantially to the content and wherein each of said plurality of onward streams is offset in time with respect to a preceding one of said plurality of onward data streams by a single offset value indicated in the control data.

11. A method as claimed in Claim 10, further comprising generating the plurality of onward data streams prior to receipt of all of the incoming data stream.

13. A method as claimed in Claim 10, further comprising the step of looping a first one of said plurality of onward data stream at least once.

14. Computer executable software code stored on a computer readable medium, the code being for streaming data between a content providing server and a plurality of client terminator units, the code comprising:

code to receive control data sent from the content providing server;

code to receive at least part of an incoming data stream corresponding to content from the content providing server in response to requests for the content,

code to generate, in response to receiving the control data and the at least part of the incoming data stream, a plurality of onward data streams;

code to transmit the plurality of onward data streams to the plurality of client terminator units, respectively,

wherein the plurality of onward data streams correspond substantially to the content and wherein each of said plurality of onward streams is offset in time with respect to a preceding one of said plurality of onward data streams by a single offset value indicated in the control data.

15. Computer executable software code as claimed in Claim 14, further comprising:

code to generate the plurality of onward data streams prior to receipt of all of the incoming data stream.

17. Computer executable software code as claimed in Claim 14, further comprising:

code to loop a first one of said plurality of onward data stream at least once.

18. A programmed computer for streaming data between a content providing server and a plurality of client terminator units, comprising memory having at least one region for storing computer executable program code, and

a processor for executing the program code stored in memory, wherein the program code includes:

code to receive control data sent from the content providing server;

code to receive at least part of an incoming data stream corresponding to content from the content providing server in response to requests for the content,

code to generate, in response to receiving the control data and the at least part of the incoming data stream, a plurality of onward data streams;

code to transmit the plurality of onward data streams to the plurality of client terminator units, respectively,

wherein the plurality of onward data streams correspond substantially to the content and wherein each of said plurality of onward streams is offset in time with respect to a preceding one of said plurality of onward data streams by a single offset value indicated in the control data.

19. A programmed computer as claimed in Claim 18, wherein the program code further comprises:

code to generate the plurality of onward data streams prior to receipt of all of the incoming data stream.

21. A programmed computer as claimed in Claim 18, wherein the program code further comprises:

code to loop a first one of said plurality of onward data stream at least once.

22. A computer readable medium having computer executable software code stored thereon, the code being for streaming data between a content providing server and a plurality of client terminator units and comprising:

code to receive control data sent from the content providing server;

code to receive at least part of an incoming data stream corresponding to content from the content providing server in response to requests for the content,

code to generate, in response to receiving the control data and the at least part of the incoming data stream, a plurality of onward data streams;

code to transmit the plurality of onward data streams to the plurality of client terminator units, respectively,

wherein the plurality of onward data streams correspond substantially to the content and wherein each of said plurality of onward streams is offset in time with respect to a preceding one of said plurality of onward data streams by a single offset value indicated in the control data.

23. A computer readable medium as claimed in Claim 22, further comprising:

code to generate the plurality of onward data streams prior to receipt of all of the incoming data stream.

25. A computer readable medium as claimed in Claim 22, further comprising:

code to loop a first one of said plurality of onward data stream at least once.

Evidence Appendix

There is no such appendix.

Related Proceedings Appendix

There is no such appendix.